

## AMENDMENTS TO THE CLAIMS

5 1-86. Cancelled

87. (Currently amended) A method of messaging over a network between patients and healthcare providers, comprising steps of:

initiating a query message by a patient from a patient-operated computer using a first medical messaging wizard;

10 generating a problem-specific, patient-specific electronic form for said patient to complete by said first medical messaging wizard from a problem-related database and a medical profile for said patient, wherein a form completed by said patient comprises a query message;

15 sending said query message to a workflow engine at a separate network location from said patient-operated computer;

attaching said patient's medical profile to said query message by said workflow engine;

20 routing said query message with said attached medical profile to a physician-operated computer at a network location separate from said patient-operated computer and said workflow engine;

using a second medical messaging wizard from said physician-operated computer, viewing said query message by a first physician, generating a patient

response message and directing said response message to said patient by means of said workflow engine;

if a prescription is indicated, embedding a prescription in said response message by said physician, wherein said patient response message having said embedded  
5 prescription is sent to said patient by means of said workflow engine;

viewing said embedded prescription by said patient;

routing said embedded, viewed prescription to a pharmacy of choice by said  
patient by means of said workflow engine, wherein said workflow engine automatically  
updates said medical profile with said prescription;

10 appending a billing to said response by means of said second medical  
messaging wizard;

sending billing data to said workflow engine, wherein said workflow engine and  
directs said patient response having said appended billing to said patient;

routing messages among physicians and physician extenders by means of said  
15 workflow engine;

wherein said workflow engine integrates a plurality of operations as a single  
medical profiler process, said medical profiler process including at least updating of said  
medical profile, attaching said medical profile to patient queries directed to said  
physician-operated computer, billing operations and prescribing operations; and

20 wherein said patient-operated computer and said physician-operated computer  
are intermittently connected to said network, and wherein exchange of messages is  
asynchronous.

88.— (Previously added) The method of Claim 87, further comprising steps of:

~~appending a billing to said response; and  
generating a patient response log entry in said medical profile of said patient at  
said workflow engine.~~

- 5 89. (Currently amended) The method of Claim 8[7]8, further comprising steps of:  
encrypting said query message at said patient-operated computer;  
decrypting said encrypted query message at said workflow engine;  
encrypting said decrypted query message by said workflow engine;  
decrypting said query message from said workflow engine at said physician-  
10 operated computer;  
encrypting said response at said physician-operated computer; and  
any of the steps of:  
decrypting said encrypted response message at said workflow engine;  
and  
15 decrypting said encrypted response message at said patient-operated  
computer.

90. (Currently Amended) The method of Claim 87, ~~further comprising steps of~~  
wherein routing messages comprises:  
20 routing said query message with said attached medical profile to a physician  
extender using a separate computer at a separate network location;  
using a third medical message wizard:  
viewing said query message by said physician extender;  
generating a proposed response message to said query message;

attaching said proposed response message to said query message;  
routing said query message with said proposed response message to said  
first physician; and  
generating said response message by said first physician using said  
5 medical message wizard based on said proposed response message.

91. (Previously added) The method of Claim 90, wherein said physician extender  
comprises either of an administrator and a physician assistant.

10 ~~92. (Previously added) The method of Claim 87, further comprising a step of:  
embedding a prescription in said response message.~~

~~93. (Previously added) The method of Claim 92, further comprising steps of:  
selecting a pharmacy by said patient; and  
15 directing a message to said pharmacy by said patient ordering said prescription.~~

94. (Previously added) The method of Claim 90, wherein said physician extender  
comprises a nurse, said step of generating a proposed response to said query  
comprising a step of:  
20 embedding a proposed prescription refill in said proposed response.

95. (Previously added) The method of Claim 94, further comprising steps of:  
reviewing said proposed prescription refill by said first physician; and  
any of the steps of:

approving said proposed prescription refill;  
revising said proposed prescription refill;  
deleting said proposed prescription refill; and  
embedding a second prescription.

5

96. (Previously added) The method of Claim 90, wherein said third message wizard is implemented as a computer program residing in computer readable media accessible by said physician extender operating said computer.

10 97. (Currently amended) The method of Claim 8[8]Z, further comprising a step of generating a billing report from said medical profile of said patient:

98. (Previously added) The method of Claim 97, said network including a billing system accessing said network at a billing system address on said network, and further  
15 comprising steps of:

sending said billing report from said medical profile of said patient to said  
billing system address; and  
billing said patient from said billing report.

20 99. (Previously added) The method of Claim 98, wherein billing said patient comprises either of:

generating a personal bill for said patient; and  
generating at least one insurance bill for said patient to a corresponding  
insurance provider.

100. (Previously added) The method of Claim 87, wherein generating a response to said query message further comprises;

generating a first-physician-second opinion request message;

5 sending said first-physician-second opinion request message to a second physician at a corresponding second physician address;

viewing said second opinion request message by said second physician;

generating a second opinion message by said second physician; and

10 sending said second opinion message to said first physician.

101. (Previously added) The method of Claim 87, further comprising a step of maintaining a collection of patient response templates, wherein said first physician invokes one of said collection of templates in responding to said query message.

15 102. (Currently amended) The method of Claim 87, wherein said step of routing messages comprises:

maintaining a routing table including at least one routing directive to said first physician;

20 wherein sending said patient medical query message to a first physician with said corresponding physician address further comprises;

examining said routing table based upon said patient medical query message to find a first of said routing directives to said first physician compatible with said patient medical query message;

finding said first routing directive to said first physician compatible with said patient medical query message.

103. (Previously added) The method of Claim 87, wherein said messaging protocol  
5 supports email.

104. (Previously added) The method of Claim 103, wherein said messaging protocol supports TCP/IP.

105. (Previously added) The method of Claim 104, wherein said messaging protocol  
10 supports the World Wide Web.

106. (Previously added) The method of Claim 87, wherein said second message wizard is implemented as a computer program residing on a computer readable medium  
15 accessible by said physician-operated computer.

107. (Previously added) The method of Claim 87, wherein said first message wizard is implemented as a computer program residing on a computer readable medium accessible by said patient operated computer.

20 108. (Currently amended) The method of Claim 87, wherein said workflow engine resides on at least one server capable of accessing said network to receive and send messages; and wherein said workflow engine is implemented as a program system

~~wherein the various stated operations are implemented as component programs which may be concurrently operating.~~

109. (Previously added) The method of Claim 108, wherein said workflow engine  
5 resides on exactly one server capable of accessing said network to receive and send messages.

~~110. (Previously added) A computer program residing on a computer readable medium accessible by a workflow engine computer system communicating with a  
10 network, said network further communicating with at least one patient operated computer and further communicating with at least one physician operated computer comprising;~~

~~code for receiving a query message from a patient via said patient operated computer and generating a patient message log entry in a medical profile of said first  
15 patient;~~

~~code for attaching said patient's medical profile to said query message by said workflow engine; and~~

~~code for receiving a patient response message from a first physician based upon said query message from said first patient and generating a physician response log  
20 entry in said medical profile of said first patient.~~

~~111. (Previously added) The computer program of Claim 110, further comprising code for determining said first physician based upon said query message received from said patient.~~



~~112. (Previously added) The computer program of Claim 110, further comprising:~~

~~code for determining if said received patient response message contains an embedded prescription;~~

~~code for receiving a patient prescription order message from said first patient;~~  
~~and~~

~~code for generating a prescription order message based upon said received patient prescription order message and said received patient response message and for sending said prescription order message to a first pharmacy.~~

~~113. (Previously added) The computer program of Claim 110, wherein said network further communicates with at least one physician extender operated computer; and~~

~~further comprising code for generating a second query message based upon said received query message from said patient and sending said second query message to a first of said physician extender operated computer.~~

~~114. (Previously added) The computer program of Claim 113, wherein said code for generating a second query message based upon said received query message from said patient and sending said second patient medical query message to a first of said physician extenders further comprises code for determining said first physician extender based upon said received query message from said first patient.~~

~~115. (Previously added) The computer program of Claim 114, further comprising code for receiving a proposed patient response message from said first physician extender~~

~~via said physician extender operated computer and generating a proposed first response log entry from said received proposed first patient response message in said medical profile of said patient.~~

- 5    ~~116. (Previously added) The computer program of Claim 114, wherein said code for generating a second patient medical query message based upon said received educated query message from said first patient and sending said second patient medical query message to a first of said physician extenders further comprises code for:~~
- 10    ~~determining a routing chain comprised of at least one successor physician extender of a physician extender routing collection comprising each of said physician extenders and embedding said routing chain into said second patient medical query message;~~

~~wherein said proposed patient response is routed from said first physician extender to each said successor physician extender belonging to said routing chain until~~

15    ~~each said successor physician extender has responded to said proposed patient response; and~~

~~wherein after each successor physician extender has responded to said proposed patient response to create a collectively proposed patient response message, said collectively patient response message is routed to said first physician.~~

20

~~117. (Previously added) The computer program of Claim 110, further comprising code for generating a routing tree comprised of at least one routing arrow based upon said received query, each of said routing arrows contains a source and a destination belonging to a tree routing collection comprised of at least each of said physicians, and~~

~~each of said routing arrows connecting to form a chain containing a final destination of said first physician; and~~

~~code for generating a source patient query message for each said source of each said routing arrow of said routing tree containing said chain of said routing arrow and sending said source patient query message to said source of said routing arrow of said routing tree.~~

~~118. (Previously added) The computer program of Claim 117, further comprising code for receiving a partial patient response message from each said source of each said routing arrow and generating a partial patient response log entry in said medical profile of said first patient.~~